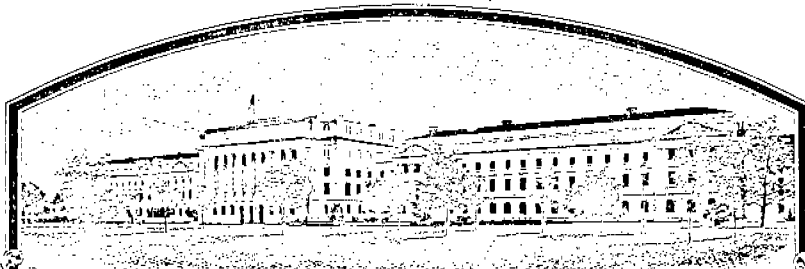


No.



7200077

THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Soybean Research Foundation, Inc.

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED NOVEL VARIETY OF SEXUALLY REPRODUCED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF *seventeen* YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT. IN THE UNITED STATES SEED OF THIS VARIETY (1) SHALL BE SOLD BY VARIETY NAME ONLY AS CLASS OF CERTIFIED SEED AND (2) SHALL CONFORM TO THE NUMBER OF GENERATIONS SPECIFIED BY THE OWNER OF THE RIGHTS. (54 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

SOYBEAN

SRF 450

In Testimony Whereof, I have hereunto set my hand and caused the seal of the Plant Variety Protection Office to be affixed at the City of Washington this fifth day of July in the year of our Lord one thousand nine hundred and seventy three.

Attest:

L. J. Roller
Commissioner
Plant Variety Protection Office
Grain Division
Agricultural Marketing Service

Earl L. Butz
Secretary of Agriculture

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

INSTRUCTIONS: See Reverse.

1. VARIETY NAME OR TEMPORARY DESIGNATION SRF 450	2. KIND NAME Soybeans	FOR OFFICIAL USE ONLY PVPO NUMBER 72077	
3. GENUS AND SPECIES NAME Glycine max (L.) Merr.	4. FAMILY NAME (Botanical) Leguminosae	FILING DATE 1/21/72	TIME 1:30 A.M. P.M.
	5. DATE OF DETERMINATION October, 1969	FEE RECEIVED \$50.00	CHARGES
6. NAME OF APPLICANT(S) Soybean Research Foundation, Inc.	7. ADDRESS (Street and No. or R.F.D. No., City, State, and ZIP Code) P.O. Box #72 Mason City, Illinois 62664	8. TELEPHONE AREA CODE AND NUMBER 217-482-3219	
9. IF THE NAMED APPLICANT IS NOT A PERSON, FORM OF ORGANIZATION: (Corporation, partnership, association, etc.) Corporation		10. STATE OF INCORPORATION Illinois	11. DATE OF INCORPORATION April 28, 1965

12. Name and mailing address of applicant representative(s), if any, to serve in this application and receive all papers:

**Arnold L. Matson
Director of Soybean Breeding
Soybean Research Foundation, Inc.
Mason City, Illinois 62664**

13. CHECK BOX BELOW FOR EACH ATTACHMENT SUBMITTED:

- ☒ 12A. Exhibit A, Origin and Breeding History of the Variety (See Section 52, P.L. 91-577)
- ☒ 12B. Exhibit B, Botanical Description of the Variety
- ☐ 12C. Exhibit C, Objective Description of the Variety
- ☒ 12D. Exhibit D, Data Indicative of Novelty
- ☒ 12E. Exhibit E, Statement of the Basis of Applicant's Ownership

The applicant declares that a viable sample of basic seed of this variety will be deposited upon request before issuance of a certificate and will be replenished periodically in accordance with such regulations as may be applicable. (See Section 52, P.L. 91-577).

14A. Does the applicant(s) specify that seed of this variety be sold by variety name only as a class of certified seed? (See Section 83(a), P.L. 91-577) (If "Yes," answer 14B and 14C below.) <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	
14B. Does the applicant(s) specify that this variety be limited as to number of generations? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	14C. If "Yes," to 14B, how many generations of production beyond breeder seed? 3

Applicant is informed that false representation herein can jeopardize protection and result in penalties.

The undersigned applicant(s) of this sexually-reproduced novel plant variety believes that the variety is distinct, uniform, and stable as required in Section 41 and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act (P.L. 91-577).

January 18, 1972

(DATE)

Arnold L. Matson

(SIGNATURE OF APPLICANT)

(DATE)

(SIGNATURE OF APPLICANT)

SOYBEAN

'SRF 450'

13A. Exhibit A:

'SRF 450' originated as a composite of the seed of 218 F₂ plant progenies from the backcross 'Kent' (8) x PI 88818. Ten BC₆ plants were used in the last backcross to produce the BC₇ progenies which were bulked to produce 'SRF 450.' The 218 F₂ progenies were selected for homozygosity for the narrow leaf character (na) and for uniform appearance.

13B. Exhibit B:

'SRF 450' is very similar to 'Kent' in plant type, seed coat color, pod color, flower color, and maturity. It differs from 'Kent' in leaf shape, seed size, and number of seeds per pod. Leaf shape of 'SRF 450' is lanceolate -- 'Kent' is ovate; seed size 17.8 g/100 seeds compared to 19.1 g/100 seeds for 'Kent.' 'SRF 450' produces a high proportion of 4-seeded pods.

13C. Exhibit C:

Seed shape	: Spherical
Seed color	: Medium shade yellow
Seed luster	: Shiny
Seed size	: 18 g/100 seeds
Hilum color	: Black
Cotyledon color	: Yellow
Protein content	: 37.8%
Oil content	: 20.6%
Leaflet shape	: Lanceolate
Leaf color	: Medium green
Leaf width	: 67 mm.
Leaf length	: 150 mm.
Flower color	: Purple
Pod color	: Brown
Plant pubescence color	: Brown
Plant habit	: Bushy
Hypocotyl color	: Purple

'SRF 450'
Soybean

PV # 7200077
2

13C. Exhibit C (continued):

Maturity group: IV - 128 days
Lodging score : 1.8
Height : 124 cm.
Disease : Susceptible to Soybean Cyst,
Downy Mildew, and Phytophthora
Root Rot

13D. Exhibit D:

'SRF 450' is the only variety of its maturity group which has a lanceolate shaped leaf. It is most similar to 'Kent' but differs from 'Kent' in leaf shape, seed size, and number of seeds per pod.

13E. Exhibit E:

The Soybean Research Foundation is employer of the breeder, Dr. Arnold L. Matson, and is therefore the sole owner of the SRF 450 variety of soybean.

Exhibit A -

"SRF 450" soybeans (Glycine max (L.) Merr.) originated as a composite of the seed of 218 F₂ plant progenies from the back-cross Kent (8) x PI 88818. 10 BC₆ plants were used in the last back-cross to produce the BC₇ progenies which were bulked to produce SRF 450. The 218 progenies were selected for homozygosity for the narrow leaf characteristic (na) and for uniformity in appearance. All breeding and selection was carried out at the Soybean Research Foundation under the supervision of Dr. Arnold L. Matson.

Exhibit B -

Seed of SRF 450 is round, seed coat shiny and has a black hilum. The trifoliolate leaves are lanceolate in shape, flowers are purple, pod color brown, pubescence tawny, and growth habit indeterminate. It is of late Group IV maturity. It is very similar to Kent in plant type, seed coat color, pod color, flower color, and maturity. It differs from Kent mainly in leaf shape, seed size, and number of seeds per pod. Leaf shape of SRF 450 is lanceolate - Kent ovate, seed size 17.8 grams per 100 seeds compared to 19.1 grams per 100 seeds for Kent. SRF 450 produces a high proportion of 4 seeded pods, this % will vary with rate of planting, soil type, and weather but in all cases will be higher than Kent grown under the same conditions.

Exhibit D -

Particulars of Trial Performance

Average performance in 1971 Southern Iowa Yield Test

	Yield (bu/a)	Maturity (Mo-day)	Height (in.)	Lodg. score	Emerg. score	Chlor- osis score	Seeds /lb.	Protein* %	Oil* %
Kent	37.6	9-30	48	1.9	1	4	2300	38.4	20.7
SRF 450	36.8	9-30	49	1.8	1	3	2700	37.8	20.6

*Not from Southern Iowa Yield Test but from test grown in Central Illinois

Exhibit E -

The Soybean Research Foundation is employer of the breeder, Dr. Arnold L. Matson, and is therefore the sole owner of the SRF 450 variety of soybean.

Signed

Arnold L. Matson
Arnold L. Matson

OBJECTIVE DESCRIPTION OF VARIETY
SOYBEAN (GLYCINE MAX)

INSTRUCTIONS: See Reverse.

NAME OF APPLICANT(S)

Soybean Research Foundation, Inc.

ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP Code)

P.O. Box #72
Mason City, Illinois 62664

FOR OFFICIAL USE ONLY

PVPO NUMBER

72077

VARIETY NAME OR TEMPORARY
DESIGNATION

SRF 450

Place the appropriate number that describes the varietal character of this variety in the boxes below.

1. SEED SHAPE:

☒ 1

1 = SPHERICAL

2 = SPHERICAL
FLATTENED

3 = ELONGATE

4 = OTHER (Specify)

2. SEED COAT COLOR:

☒ 1

1 = YELLOW

2 = GREEN

3 = BROWN

4 = BLACK

5 = OTHER (Specify)

SHADE:

☒ 2

1 = LIGHT

2 = MEDIUM

3 = DARK

3. SEED COAT LUSTER:

☒ 2

1 = DULL

2 = SHINY

4. SEED SIZE

☒ 1☒ 8

GRAMS PER 100 SEEDS

5. HILUM COLOR:

☒ 6

1 = BUFF

2 = YELLOW

3 = BROWN

4 = GRAY

5 = IMPERFECT
BLACK

6 = BLACK 7 = OTHER (Specify)

SHADE:

☐ 1

1 = LIGHT

2 = MEDIUM

3 = DARK

6. COTYLEDON COLOR:

☒ 1

1 = YELLOW

2 = GREEN

☒ 2

1 = SMALL

2 = MEDIUM

3 = LARGE

8. LEAFLET SHAPE:

☒ 3

1 = OVATE

2 = OBLONG

3 = LANCEOLATE

4 = ELLIPTICAL

5 = OTHER (Specify)

9. LEAF COLOR (See reverse):

☒ 2

1 = LIGHT GREEN

2 = MEDIUM GREEN

3 = DARK GREEN

10. FLOWER COLOR:

☒ 2

1 = WHITE

2 = PURPLE

3 = OTHER (Specify)

11. POD COLOR:

☒ 2

1 = TAN

2 = BROWN

3 = BLACK

12. POD SET:

☐ 1

1 = SCATTERED

2 = CONCENTRATED

13. PLANT PUBESCENCE COLOR:

☒ 2

1 = GRAY

2 = BROWN

3 = OTHER (Specify)

SHADE:

☐ 1

1 = LIGHT

2 = MEDIUM

3 = DARK

14. PLANT TYPES (See Reverse):

☒ 2

1 = SLENDER

2 = BUSHY

3 = INTERMEDIATE

15. PLANT HABIT:

☒ 2

1 = DETERMINATE

2 = INDETERMINATE

3 = OTHER (Specify)

16. HYPOCOTYL COLOR:

☒ 2

1 = GREEN

2 = PURPLE

17. SEED PROTEIN:

☐ 1

1 = A

2 = B

18. NUMBER OF DAYS TO FLOWERING

(Place a zero in first box (e.g. 0 9) when
days are 9 or less.)☐ 0 ☐ 9

19. MATURITY GROUP:

☒ 6

1 = 00

2 = 0

3 = I

4 = II

5 = III

6 = IV

7 = V

8 = VI

9 = VII

10 = VIII

20. SIZE OF 10 DAY OLD SEEDLING GROWN UNDER CONSTANT LIGHT (Growth Chamber) AT 25° C. (Place a zero in first box
(e.g. 0 2) when size is 9 mm. or less.)☐ 0 ☐ 2MM. LENGTH
OF SEEDLING☐ 0 ☐ 2MM. LENGTH
OF COTYLEDON☐ 0 ☐ 2MM. WIDTH
OF COTYLEDON

21. DISEASE: (Enter 0 = Not Tested; 1 = Susceptible; 2 = Resistant)

☐ 0BACTERIAL
PUSTULE☒ 1SOYBEAN
CYST☒ 1DOWNY
MILDEW☐ 0PURPLE
STAIN☐ 0POD AND
STEM BLIGHT☐ 0ROOT
KNOT☐ 0

FROGEYE

☐ 0STEM
CANKER☒ 1PHYTO-
PHTHORA☐ 0BROWN
STEM ROT☐ 0TARGET
SPOT☐ 0BROWN
SPOT☐ 0BUD
BLIGHT☐ 0

WILDFIRE

☐ 0RHIZOCTONIA
ROT☐ 0

OTHER (Specify)

22. INDICATE WHICH VARIETY MOST CLOSELY RESEMBLES THAT SUBMITTED.

CHARACTER	NAME OF VARIETY	CHARACTER	NAME OF VARIETY
Plant shape	Kent	Petiole angle	Kent
Leaf shape	SRF 400	Seed size	Kent
Leaf color	Kent	Seed shape	Kent
Leaf surface	Kent	Seedling pigmentation	Kent

23. GIVE DATA FOR SUBMITTED AND SIMILAR STANDARD VARIETY:

VARIETY	NO. OF DAYS TO MATURITY	LODGING SCORE	PLANT HEIGHT CM	LEAF SIZE		CONTENT		AVERAGE NO. OF PODS PER PLANT	IODINE NO.
				Width MM	Length MM	Protein	Oil		
Submitted	128	1.8	124 49"	67	150	37.8	20.6 %		
Name of similar variety Kent	128	1.9	127 48"	94	129	38.4	20.7		

INSTRUCTIONS

GENERAL: The following publications may be used as a reference aid for completing this form:

1. Scott, Walter O. and Samuel R. Aldrich, 1970, Modern Soybean Production, The Farmer Quarterly.
2. Norman, A. G., 1963, The Soybean: Genetics, Breeding, Physiology, Nutrition, Management.
3. McKie, J. W., and K. L. Anderson, 1970, The Soybean Book.

LEAF COLOR: Nickerson's or any recognized color fan may be used to determine the leaf color of the described variety. The following Soybean varieties may be used as a guide to identify the colors listed on the form.

COLOR	VARIETY
Light Green	"Ada"
Medium Green	"Wilkin"
Dark Green	"Swift"

LEAF SIZE: The following varieties may be used as a guide to identify the relative size leaves.

SIZE	VARIETY
Small	"Amsoy"
Medium	"Bonus"
Large	"Anoka"

PLANT TYPE: The following varieties may be used as a guide to identify the plant type.

TYPE	VARIETY
Slender	"Vansoy"
Intermediate	"Wirth"
Bushy	"Adelphia"

Application No. 72077 Soybean SRF 450

Exhibit D - Data Indicative of Novelty

SRF 450 is the only variety of its maturity which has a lanceolate shaped leaf. It is most similar to Kent. The data below indicates that it is different from Kent.

Average performance in 1971 Southern Iowa Yield Test

	Yield (bu/a)	Maturity (Mo-day)	Height (in.)	Lodg. score	Chlor- osis	Leaf Size		Seeds per lb.	Protein* %	Oil* %
					score	Width	Length			
Kent	37.6	9-30	48	1.9	4	94mm.	129mm.	2300	38.4	20.7
SRF 450	36.8	9-30	49	1.8	3	67mm.	150mm.	2700	37.8	20.6

*Not from Southern Iowa Yield Test but from test grown in Central Illinois.

Application No. 72077 Soybean SRF 450

EXHIBIT D

Data Indicative of Novelty

SRF 450 is very similar to its recurrent parent, Kent, except that (1) the trifoliate leaves are lanceolate in shape, (2) a larger percentage of its pods bear 4 seeds and (3) seed size is slightly smaller.

SOYBEAN RESEARCH FOUNDATION, INC.
PLANT INSTITUTE BLDG.
MASON CITY, ILLINOIS 62664



United States
Department of
Agriculture

Agricultural
Research
Service

Northern Plains Area
National Seed
Storage Laboratory

Ft. Collins, Colorado
80523
Telephone: 303 484-0402
Fax: 303 221-1427

August 30, 1990

Dr. K. H. Evans, Commissioner
Plant Variety Protection Office
Nal Building, Rm. 500
10301 Baltimore Blvd.
Beltsville, MD 20705-2351

Dear Dr. Evans:

Subject: Expiration of Protection and Transfer of Seed Samples

As you requested, the National Seed Storage Laboratory has transferred the following samples to conventional storage and marked all records and GRIN, showing the samples expired.

<u>PV #</u>	<u>VARIETY NAME</u>	<u>ACTION TAKEN</u>
<u>SOYBEAN</u>		
7100016	SRF 100	Expired, transfer to NSSL 8-30-90
7100019	SRF 400	Expired, transfer to NSSL 8-30-90
7200077	SRF 450	Expired, transfer to NSSL 8-30-90
7200082	Cutler 71	Expired, transfer to NSSL 8-30-90
7200083	Amsoy 71	Expired, transfer to NSSL 8-30-90
7200086	SRF 150	Expired, transfer to NSSL 8-30-90
7200126	Bonus	Expired, transfer to NSSL 8-30-90
7300010	Buccaneer	Expired, transfer to NSSL 8-30-90

Sincerely,

TONI PISANO
Computer Assistant